

Abstract

It is an object of the present invention to provide fungal host organisms capable of expressing recombinant proteins while at the same time exhibiting satisfactory growth characteristics. It is a further object to provide - in a single fungal host organism - the characteristic of homogeneous growth and low viscosity typically associated with yeast organisms, and the capability for high protein secretion normally associated with filamentous fungi. It is a yet further object of the invention to provide useful tools for genetic analysis in zygomycetes, including dimorphic zygomycetes. Accordingly, the present invention relates to a recombinant, fungal cell or dimorphic fungal cell comprising a regulatable expression of a regulator of morphology. The nucleotide sequence encoding the at least one regulator of morphology is operably linked to an expression signal not natively associated therewith. Expression of the at least one regulator of morphology directed by the expression signal not natively associated therewith results in a dimorphic shift of a dimorphic fungal cell or a desirable, improved filamentation of a fungal cell or a dimorphic fungal cell. The improved filamentation of the fungal cell or the dimorphic fungal cell is positively correlated with an increased production and/or secretion of a desirable polypeptide.